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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,721	06/05/2000	Winga Ho	SMC1P008	7907

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EXAMINER	
BOUTAH, ALINA A	

ART UNIT	PAPER NUMBER
2143	6

DATE MAILED: 12/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/587,721	HO, WINGA	
	Examiner	Art Unit	
	Alina N Boutah	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *22 September 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment received September 24, 2003. Claims 12-20 have been newly added. Claims 1-20 are pending in the present application.

Drawings

The drawings were objected to because reference number 24 in figure 2b should have been labeled as decoder. A proposed drawing correction or corrected drawing has been submitted and is approved. Therefore the objection is now withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/14971 issued to Desnoyers et al. in view of EP 0851624 issued to Uota et al.

(Amended) Regarding claim 1, Desnoyers teaches a method for transmitting encoded data between synchronized sending and receiving digital systems across a lossy transmission

media, said sending and receiving digital systems maintaining encoder and decoder information records, said method comprising the steps of:

encoding packet data to be transmitted by said sending digital system using encoding information (page 3, lines 1-4);

transmitting the encoded packet data to said receiving digital system as a packet including a header having a packet number and a tag identifying the encoding information used to encode the packet data (page 3, lines 4-5);

when the packet is received by said receiving digital system, examining the header to determine the encoding information used to encode said packet data (page 3, lines 5-7); and

decoding the packet using corresponding decoder information in said decoder information (page 1, lines 26-28).

However, Desnoyers fails to teach: said encoder information record being previously acknowledged by said receiving digital system; building a new encoder information record including the encoding information used to encode said packet data as well as the packet data; updating the decoder information in said decoder information record with said packet data; acknowledging processing of the packet to said sending digital system to enable said sending digital system to update said encoder information so that said new encoder information record is used to encode packet data; and when the packet is lost, at the sending digital system rebuilding the new encoder information record without the lost packet data.

Uota teaches a data transmission system that transmits data between a sending and receiving digital systems, wherein a packet data to be sent is constructed of information record being previously acknowledged by said receiving digital system (abstract; col. 2, lines 52-54);

building a new information record including the information used to construct said packet data as well as the packet data (abstract; col. 2, lines 52-54);

updating the information in said receiver information record with said packet data (abstract; col. 3, lines 2-10, and 32-35);

acknowledging processing of the packet to said sending digital system to enable said sending digital system to update said information so that said new information record is used to send packet data (abstract; col. 2, line 45 to col. 3, line 40; figures 4 and 5); and

when the packet is lost, at the sending digital system rebuilding the new encoder information record without the lost packet data (col. 3, lines 8-12, and lines 29-40).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the teaching of Desnoyers by combining it with the teaching of Uota because by maintaining an acknowledged information record from the decoder, the sender is able to encode and retransmit a data packet using the record that has no error, thus reducing the chance of packet lost and optimizing the encoding process.

(Amended) Regarding claim 2, Desnoyers teaches the method of claim 1, wherein said rebuilding step is performed when a packet is received out of sequence by said receiving system and a threshold amount of time elapses without the missing packet being received (page 6, line 12 to page 7, line 31, page 10, lies 12-22).

(Amended) Regarding claim 3, Desnoyers teaches the method of claim 2 wherein packets received out of sequence are stored in a queue and wherein a packet timer is initiated by said

receiving digital system to count said predetermined amount of time when a packet is received out of sequence, said packet timer being stopped when said missing packet is received (page 6, line 12 to page 7, line 31).

(Amended) Regarding claim 4, Desnoyers teaches the method of claim 3, wherein said rebuilding step includes the step of sending a synch control packet from said receiving digital system to said sending digital system, and synch control packet including a tag identifying the last packet processed by said receiving digital system, said sending digital system using said synch control packet to rebuild said new encoded information record (page 6, line 12 to page 11, line 30).

(Amended) Regarding claim 5, Desnoyers teaches the method of claim 4 wherein said rebuilding step further includes the steps of initiating a synchronization timer at said receiving digital system when said synch control packet is sent; stopping said timer when an acknowledgment is received from said sending digital system in response to said synch control packet; and resending the synch control packet and reinitiating the synchronization timer if said synchronization timer expires and an acknowledgment has not been received (page 6, line 12 to page 11, line 30).

(Amended) Regarding claim 6, Desnoyers teaches the method of claim 5 wherein said rebuilding step further includes the steps of incrementing a counter each time a synch control packet is sent; comparing the value of said counter to determine if the value equals a threshold

prior to resending the synch control packet and reinitiating the synchronization timer; and resetting the communication link between said sending and receiving digital systems if the value of said counter equals said threshold value (page 6, line 12 to page 11, line 30).

Regarding claim 7, Desnoyers teaches the method of claim 1 wherein during said acknowledging step, and acknowledgment packet is returned to said sending digital system, said acknowledgment packet including identifying the last packet processed by said receiving digital system (page 6, line 12 to page 11, line 30).

Regarding claim 8, Desnoyers teaches the method of claim 1 wherein during said acknowledging step, an acknowledgment header encapsulating data packets is returned to said sending digital system, said acknowledgment header identifying the last packet processed by said receiving digital system (page 6, line 12 to page 11, line 30).

(Amended) Regarding claim 9, Desnoyers teaches the method of claim 1 further comprising the steps of, prior to decoding said packets by said receiving digital system, examining said packets to detect corrupts packets and discarding corrupted packets (page 6, line 12 to page 11, line 30).

Regarding claim 10, Desnoyers teaches the method of claim 9 wherein during said examining step a cyclic redundancy check is performed on said packets (page 3, lines 17-27).

(Amended) Regarding claim 11, Desnoyers teaches the method of claim 10 further comprising the step of discarding received packets having packet numbers outside of a defined range of expected packet numbers (page 6, line 12 to page 11, line 30).

(New) Regarding claim 12, Desnoyer teaches the method of claim 6 further comprising the steps of, prior to decoding said packets by said receiving digital system, examining said packets to detect corrupted packets and discarding corrupted packets (page 4, lines 12-34).

(New) Regarding claim 13, Desnoyer teaches the method of claim 12 wherein during said examining step a cyclic redundancy check is performed on said packets (page 3, lines 17-27).

(New) Regarding claim 14, Desnoyer teaches the method of claim 13 further comprising the step of discarding received packets having packet numbers outside of a defined range of expected packet numbers (page 4, lines 12-34 to page 5, lines 1-24).

(New) Regarding claim 15, Desnoyer teaches the method of claim 1 wherein during encoding, the packet data is compressed, encrypted and/or scrambled (page 1, lines 26-28).

(New) Regarding claim 16, Desnoyer teaches the method of claim 9 wherein during encoding, the packet data is compressed, encrypted and/or scrambled (page 1, lines 26-28).

(New) Claims 17-20 has similar limitations as claims 1-4, therefore is rejected under the same rationale.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

In response to Applicant's argument that neither Desnoyer nor Uoto either alone or in combination teaches or suggests the encoding of packet data using encoding information in an encoder information record that has been verified as received, the creation of a new encoder information record to be used to encode future packet data that includes the encoding information used to encode the transmitted data packet as well as the transmitted packet data and rebuilding the new encoder information record without the transmitted packet data and of the transmitted data packet is not confirmed. The Patent Office respectfully submits that the mentioned teachings can be found in the combination of Desnoyer and Uoto as stated in the rejection of the claims above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N Boutah whose telephone number is (703) 305-5104. The examiner can normally be reached on Monday-Thursday (9:00 am-7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

ANB

ANB

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